

2016



White Clay Creek National Wild and Scenic River Steering Committee Update

Promoting clean water through outreach, restoration, and land preservation.





Eastern Box Turtle Hatching

Welcome to the **White Clay Creek National Wild and Scenic River Program Update**. The Watershed Steering Committee presents our 2016 accomplishments to watershed partners, legislators, and our community.

*The best way to achieve water quality goals is to take a holistic approach. Voluntary actions by private land owners, in combination with municipal efforts to meet water quality standards set forth in the Clean Water Act, coupled with the technical expertise of scientists and local watershed organizations leads to cleaner water over a shorter time frame. However small the action, collectively we **ALL** can make a positive impact.*

Fertilizers, Bacteria, and Dirt...Oh my!

Setting pollution limits is the first step toward improving water quality. The Clean Water Act (CWA) is the principal piece of federal legislation that governs water pollution. Its main objective is to make sure all of the nations waters are clean enough to support recreation and aquatic life. To meet this goal, the CWA created programs designed to regulate and reduce the amount of pollution entering waterways. One of these programs requires that states monitor their waterways and report those not meeting water quality standards. Unfortunately, despite its outward beauty, the majority of White Clay stream miles are impaired (polluted). Once streams are listed as impaired, the state calculates the maximum amount of a specific pollutant that the stream can receive and still meet water quality standards. Regulated pollutants in the White Clay include nutrients (fertilizers and waste), bacteria, and sediments (dirt).

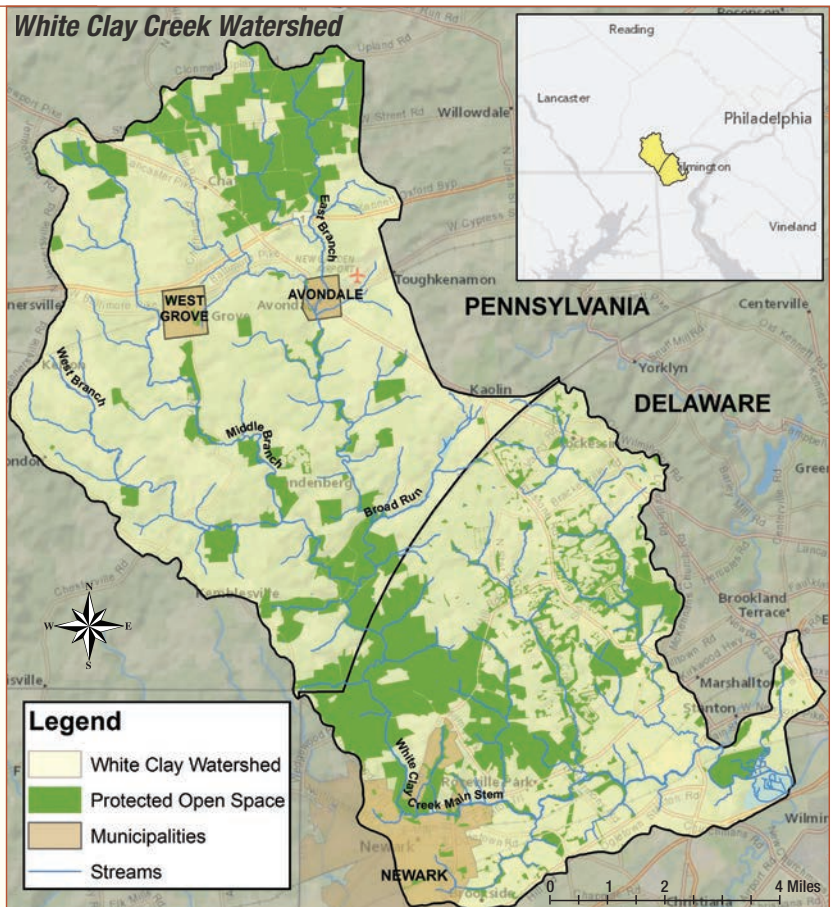
Once limits are established further efforts must be identified to reduce the pollutants at their source. Sources of polluted runoff include roads, rooftops, driveways, lawns, farm fields and agricultural operations. Increased rainfall amounts during storms generate larger amounts of polluted runoff flowing

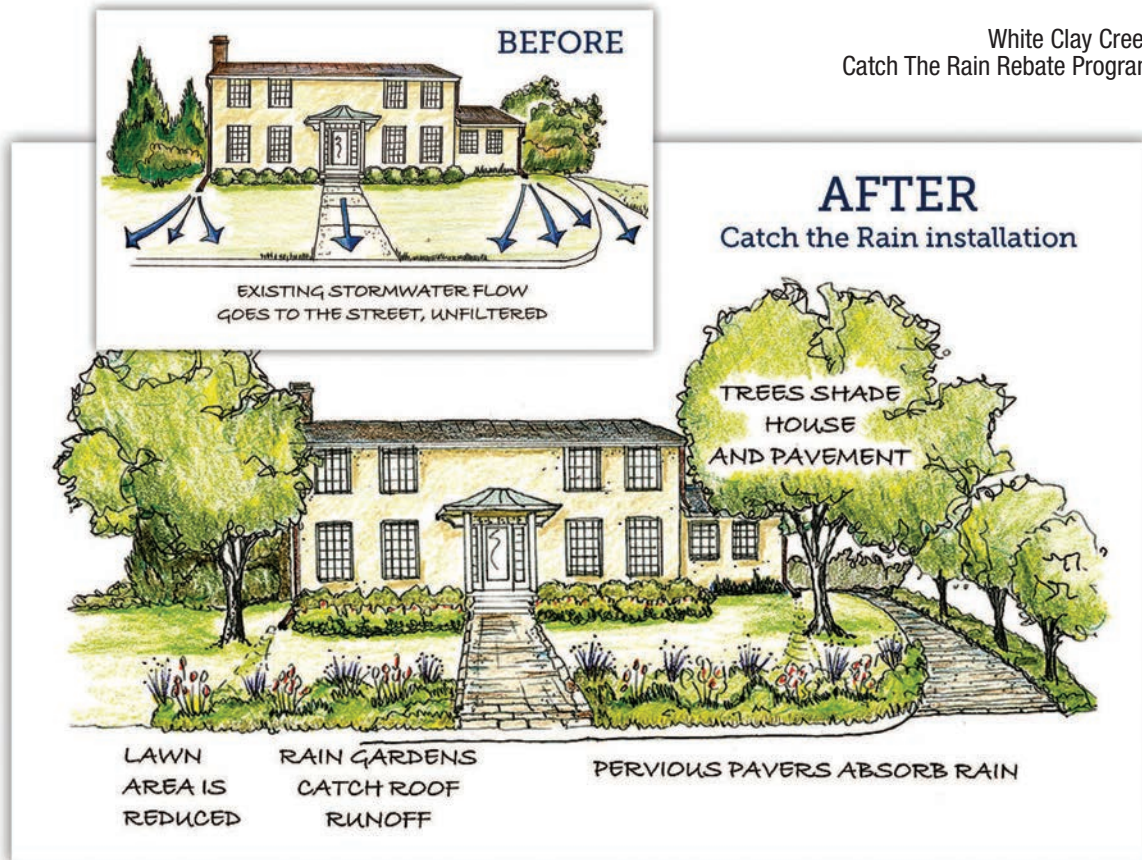
Partnership Wild and Scenic Rivers

The 1968 Wild and Scenic Rivers Act calls on the nation to preserve select rivers in free-flowing condition. Rivers are chosen on the basis of outstanding values such as scenic, recreational, ecological, geologic, historic or cultural.

Most National Wild and Scenic Rivers flow through federal lands, but Partnership Rivers flow through privately held lands or lands owned by local or state governments. The National Park Service provides funds and staff assistance to communities and local and state representatives to protect and manage these rivers for the benefit and enjoyment of present and future generations.

White Clay Creek was designated a National Wild and Scenic River by an Act of Congress signed into law by President Clinton in October, 2000. In 2014, nine additional stream miles were added to the original designation of 190, bringing the total miles protected under the Act to 199 miles.





untreated into our streams over shorter periods of time. Rain water not only picks up and carries pollutants to the creek, the volume of water running off land increases with suburbanization leading to stream bank erosion. Pollutants and increased stream bank erosion make the creek unhealthy for insects and fish as dirt smothers their preferred habitat and feeding grounds, and it makes the water more expensive to clean for the tens of thousands of our neighbors downstream who rely on the White Clay Creek as a drinking water source.

Throughout 2016, the White Clay Wild and Scenic Program expanded our stream monitoring program to identify sources of pollution and continued to collaborate with residents, local and state governments, and other charitable organizations to target effective water quality improvement projects and reduce water pollution at its source.

Catch the Rain

The best way to keep pollutants out of our water is to eliminate or reduce them at the source. 'Catching the rain' prevents stormwater, the largest source of pollution to the White Clay Creek, from washing off land during rain events. Almost all of the rain falling on roofs, driveways, roads, parking lots, mowed lawns, and patios ends up as polluted runoff. In contrast, rain falling on forests and meadow, natural sponge-like surfaces, soaks gradually into the ground, filtering out pollutants, replenishing groundwater, and keeping streams flowing during drought. Green Stormwater Infrastructure (GSI) practices incorporate the capture and detention of rainfall, simulate natural soil filtering, and reduce stormwater volumes and speeds. Reduced lawn sizes also lessen the need for mowing and fertilizer or pesticide applications. In fact, lawns have approximately the same coefficient of runoff as a driveway! Well-

managed GSI practices on your property or in your neighborhood enhance community aesthetics, increase property values, and provide important habitat for wildlife and native plants.

The White Clay Wild & Scenic River Program, in partnership with the Brandywine Conservancy, developed a new rebate program for homeowners in the White Clay Watershed. Two workshops offered last fall, targeted suburban homeowners in the White Clay watershed interested in learning more about green stormwater techniques that they could implement on their properties. The program includes educational training, financial assistance (up to \$2,500 rebate per property), and technical support to install voluntary stormwater management practices. Suggested practices include rain barrels, rain gardens and infiltration trenches, pervious paving retrofits or removal of existing paving, conservation landscape plantings, and tree plantings. Projects could be as simple as planting native shade trees over your driveway or along a stream, installing an eye-catching bed of native wildflowers, or catching the runoff from your roof to reuse on your lawn or garden. These small projects catch water at its source and can have a large cumulative effect. They help 'green' your neighborhood, boost your property values, save you money, while also helping the White Clay flow clean and clear.

"Catch the Rain is a grassroots, small-is-beautiful program to retrofit existing suburban yards to help, rather than degrade, water quality in the White Clay. Incrementally replacing only 40% of lawns and impervious surfaces in suburbia will radically improve the Creek for the people who live in the watershed."

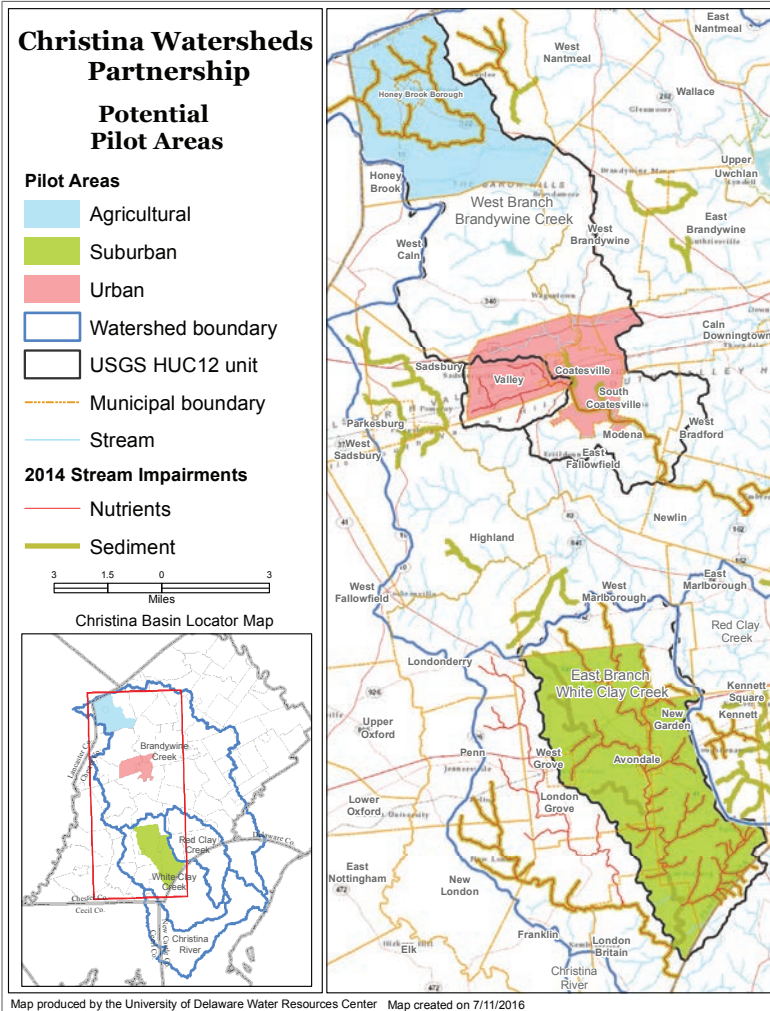
— Beth Burnam, Brandywine Conservancy

Multi-municipal Water Quality Planning

On a larger scale, the Wild and Scenic Program is working to clean up our stream through a watershed-wide multi-municipal collaborative. Three pilot areas in Chester County were identified to test out collaborative approaches to cleaning up our creeks while also assisting municipalities with their permit requirements. This effort is being led by the Brandywine Red Clay Alliance, which received grant funding from the William Penn Foundation through the National Fish and Wildlife Foundation. The pilot areas include a variety of land uses, including

suburban, urban, and rural-agricultural communities. The East Branch of the White Clay was selected as the suburban pilot, and the Wild and Scenic Program is working with municipal engineers and staff to create a multi-municipal, watershed-based pollution plan for the East Branch of the White Clay Creek. The goal is to create a plan that results in more efficient and effective implementation of stormwater pollution reductions that pools resources and works across political boundaries.

Five municipalities in the White Clay watershed have agreed to work together to identify possible ways to restore our community's waterways in a cost-effective manner. The five municipalities include Avondale, Franklin, London Grove, New Garden and West Grove. All five municipalities are required to submit stormwater management permit applications to the Pennsylvania Department of Environmental Quality (PADEP) by September 2017. By participating in the collaboration, the municipalities will benefit from direct engagement with the Pennsylvania Department of the Environment and other regulators, gain access to technical experts and guidance in the development of individual municipal separated storm sewer system (MS4) permit applications, receive assistance in determining viable financing options for permit implementation, and most importantly, use a watershed approach to develop a plan that will meet pollution goals and improve stream health.



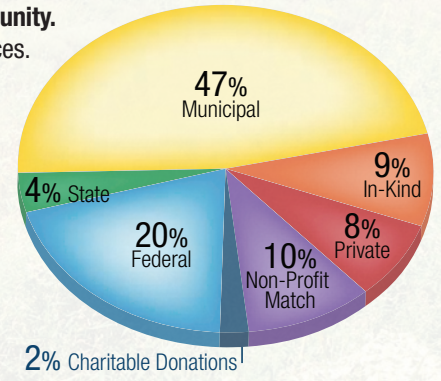
Land Preservation

Land preservation is a prime example of how Partnership Wild and Scenic Rivers leverage interests and funding to provide a better quality of life for White Clay residents. To date, 29% of the White Clay watershed is preserved land. Protecting natural lands and forests are one of the best and least expensive stormwater controls available because they naturally act as filters intercepting, slowing, and infiltrating stormwater which carries with it pollutants that would otherwise quickly run off the land directly to the creek. In 2016, conservation easements were placed on three properties, two in London Grove and one in London Britain, on a total of 86 acres. Two additional properties are pending in New Garden Township which would add another 160 acres of preserved lands in the watershed.

White Clay Wild and Scenic Maximizes Federal Dollars!

Like all Partnership National Wild and Scenic Rivers, we leverage National Park Service funding with in-kind contributions from state, county, local governments, partner organizations, and the community. In 2016 White Clay partners spent \$95,988 in federal funds to leverage \$391,148 cash and in kind services. In other words, for every dollar of federal funding spent, an additional four dollars of outside funding was leveraged, for a return on value of 400%.

A special thanks to donors of monetary assistance and in-kind services provided to the Steering Committee in 2016: NPS (\$95,000), Dockstader Foundation (\$20,000), Brandywine Red Clay Alliance (\$5,000), SUEZ (\$4,500), White Clay Creek Restoration Fund Contributions from Delaware tax filers (\$7,058), DNREC (\$3,285), Municipal match (\$230,268), Mushroom Farmers of Pennsylvania (\$1,000), Private donations (\$270), and approximately 1,300 hours of professional and volunteer assistance with land preservation, ecological restoration, reforestation planning, events, outreach, mailings, and community volunteer time valued at \$45,293.





Community Outreach

- Published the 2016 State of the White Clay Watershed Report with assistance from University of Delaware Water Resources Agency.
- Created quarterly content for New Garden and London Grove Township e-newsletters on watershed-related topics directly reaching 1,000 watershed residents.
- Hosted White Clay Creek Fest. Despite the rainy forecast, 600 people attended the event, 13 rain barrels were sold, and 250 reusable water bottles provided by SUEZ.
- Presented the Wild and Scenic Program to 100 attendees at the Osher Lifelong Learning Institute at the University of Delaware in Wilmington.
- Provided watershed signage for the Franklin Township rain garden, and the New Garden Park Riparian Buffer Corridor.
- Replaced outdated and vandalized White Clay Wild and Scenic road signs in the Pennsylvania portion of the watershed and the City of Newark.
- Co-presented 'Catch the Rain: Using Green Infrastructure to Clean Water' with the Brandywine Conservancy to watershed residents at two fall workshops.
- Presented on White Clay bacteria research to the Christina Basin Task Force.

School Programs

- Awarded a school programming scholarship for a 4.5-hour educational field trip to Stroud Water Research Center in Spring of 2016 for: 27 Newark High School students in Newark (DE), 27 seventh grade students from Assumption BVM in West Grove (PA), and 770 fourth and sixth grade students from Avon Grove Intermediate School in West Grove (PA)
- Supported on-site programming for an additional 400 fourth grade students at Avon Grove Intermediate School.
- Partnered with Stroud Water Research Center to provide relevant summer field experience in water quality sampling and analysis to an undergraduate student from Villanova University.

Watershed Monitoring and Projects

- Partnered with Stroud to expand bacteria sampling at 23 locations along the West, Middle, and East Branches in PA and include microbial source tracking at select sites.
- Partnered with the Delaware Nature Society to expand bacteria monitoring to 5 additional sites in Delaware.
- Planted 1,300 trees in Penn Township on 2.5 acres of private lands along the Middle Branch.
- Planted 935 trees at the Franklin Preserve, Franklin Township.
- Planted live stakes along 1,500 linear feet of a second order stream in New Garden Township, PA (funded by PADEP Growing Greener) and monitored site for invasive species through the growing season.
- Installed perennial plants along 300 linear feet (1 acre) of the main branch in Curtis Mill Park, Newark, DE.
- Continued communications and support of Save Our Water to conduct stream monitoring on Broad Run and Egypt Run.
- Assisted the National Park Service in monitoring development proposals and permit applications for potential impacts to the White Clay Creek and its tributaries as designated streams within the National Wild & Scenic Rivers System.

PARTNERSHIPS

Cost-Effective, Sustainable, Catalysts

2016 Partners: Brandywine Conservancy, Chester and New Castle County Conservation Districts, Delaware Department of Natural Resources & Environmental Control, Delaware Nature Society, Friends of White Clay Creek Preserve, Friends of White Clay Creek State Park, Natural Lands Trust, Pennsylvania Department of Conservation and Natural Resources, Pennsylvania Department of Environmental Protection, Stroud Water Research Center, SUEZ, University of Delaware, White Clay Watershed Association, Save Our Water, Brandywine Red Clay Alliance, Chester County Water Resources Authority, City of Newark, and Franklin, London Britain, London Grove and New Garden Townships, Avondale and West Grove Boroughs, Chester and New Castle Counties.



Dorothy Miller

Dorothy Miller was a respected conservationist and environmental activist who helped galvanize a coalition of citizens that successfully fought the construction of a large dam across the White Clay Creek and was a founding member of the White Clay Watershed Association. She advocated for the White Clay to be named a National Wild and Scenic River and was an active member on the Steering Committee since its inception. Dorothy passed away on February 22, 2016.

Upcoming Community Events 2017



Saturday May 6th 12:00 – 4:00 p.m.

Carpenter Recreation Area, White Clay Creek State Park

The family event of the spring! Listen to music by Unity Reggae, enjoy guided nature hikes, kids crafts, local food, colonial history re-enactors, fly fishing clinics, native gardening displays, rain barrels for sale, FREE water bottles to first couple hundred folks, and MORE. Co-hosted with White Clay Creek State Park, National Park Service and SUEZ.

NEW pre-Fest event: Tour the Newark Reservoir and learn how the White Clay becomes drinking water!

Other Events:

- April 8 **White Clay Clean Up**
- TBD **Catch the Rain Workshops**
- TBD **Citizen Science Stream Monitoring Workshop**

For information on all of our projects and upcoming events:



www.whiteclay.org



WhiteClayWS



WhiteClayWildandScenic



WhiteClayWS

Check out our photos on Flickr!

The Watershed Steering Committee, with our local and state partners, is charged with promoting the long-term protection of the White Clay Creek watershed and its resources in Pennsylvania and Delaware through the implementation of the Watershed Management Plan. The Management Plan Coordinator position was added in 2002 to assist the Committee in project and administrative duties.

The White Clay Creek watershed contains some significant natural areas and outstanding values which enabled the watershed to achieve its federal designation as a Wild and Scenic River. The Wild and Scenic Rivers Program supports projects that protect this jewel of a landscape through community outreach and education, open space preservation, restoration, and research.

White Clay Creek Wild and Scenic Steering Committee Members:

- Ed O'Donnell**, Delaware Co-Chair, Fly Fishers
- Kyle Sonnenberg**, Delaware Co-Chair, Vice President White Clay Creek Watershed Association (WCWA)
- Don Peters**, Pennsylvania Co-Chair, New Garden Township
- Martha Corrozi Narvaez**, University of Delaware Water Resources Agency
- Kristen Travers**, Delaware Nature Society/WCWA
- Douglas Janiec**, Sovereign Consulting Inc./WCWA
- Martin Wells**, London Britain Land Trust/WCWA
- Beth Burnam**, Brandywine Conservancy
- Erin McCormick**, Natural Lands Trust
- Brian Styche**, Chester County Planning Commission
- Angel Burns**, DNREC, Division of Parks and Recreation
- Gerald Kauffman**, University of Delaware Water Resources Agency
- Rick Mickowski**, New Castle Conservation District
- Aileen Parrish**, London Britain Township
- April Schmitt**, Friends of Pennsylvania White Clay Creek Preserve
- Jennifer Egan**, University of Delaware, Policy Fellow
- Mike Zuk**, Chester County Conservation District
- Tom Coleman**, City of Newark
- Thomas Zawislak**, President White Clay Watershed Association
- David Hawk**, Treasurer White Clay Watershed Association
- Shane Morgan**, Management Plan Coordinator - Staff
- Charles Barscz**, Chief, National Wild and Scenic Rivers Northeast Region, liaison to Wild & Scenic Watershed Steering Committee



WHITE CLAY CREEK
National Wild & Scenic River

Ours to Enjoy. Ours to Protect.

PO Box 10, Landenberg, PA 19350

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Funding for this publication provided by the National Park Service.